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 Display Show:
☐ 1: AH001152. Bovine preprotach...[gi:163589]

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LOCUS BOVPPTA1 304 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine preprotachykinin B gene, exon 1''.

ACCESSION M14344

VERSION M14344.1 GI:163580

KEYWORDS .

SEGMENT 1 of 9

SOURCE Bos taurus (cow)

 ORGANISM Bos taurus

 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
 Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 304)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.

TITLE Structure and gene organization of bovine neuromedin K precursor

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)

 MEDLINE [86313713](#)

 PUBMED [3462746](#)

COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.

FEATURES Location/Qualifiers

source 1..304

/organism="Bos taurus"

/mol_type="genomic DNA"

/db_xref="taxon:9913"

prim_transcript <162..>304

/note="preprotachykinin mRNA"

intron 285..>304

/note="pre-tach-B intron A"

BASE COUNT 63 a 85 c 97 g 59 t

ORIGIN 162 bp upstream of EcoRI site.

```

1 ggcagtgggc acagacaggg ccagccgggc tggaggcgag ggggaccaga cctctcactc
61 ccggcctgtg atatctccca ggctgtcctt aggagagaaa aatgaatccc ttccctgctg
121 tttctcccct ccctaagatc tcttcagtgg gctccaaggg ggaattcctg ctgctcagtg
181 agcatgtgat tgaactgctg accaaaaatat gccggggtac actggatgcc acgcagatgc
241 agcttccagt caccgtgact gaggagtaag gccgtgagcc gggggtgagg gatggcttgg
301 ggca

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//

LOCUS BOVPPTA2 371 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine preprotachykinin B gene, exon 1'.

ACCESSION M14345

VERSION M14345.1 GI:163581

KEYWORDS .

SEGMENT 2 of 9

SOURCE Bos taurus (cow)

 ORGANISM Bos taurus

 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
 Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 371)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
 TITLE Structure and gene organization of bovine neuromedin K precursor
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
 MEDLINE [86313713](#)
 PUBMED [3462746](#)
 COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
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 /mol_type="genomic DNA"
 /db_xref="taxon:9913"
 prim transcript <1..>371
 /note="preprotachykinin mRNA and introns"
 intron <1..41
 /note="pre-tach-B intron A"
 intron 338..>371
 /note="pre-tach-B intron B"
 BASE COUNT 70 a 106 c 107 g 88 t
 ORIGIN 226 bp downstream of exon 1''; 236 bp upstream of Sau3AI site.
 1 gagggcgcta cgtttgccct tctatctgtt ccctgctcca ggttctcagt gaagttcaag
 61 gagggcagct tgacggtcaa ggcatccag ggccctgggg gtggtgggac tggcaagctg
 121 agcttcaaga agaaggggag tcgttgccctg gaggtgactg tacaatgagg aggtgcagcg
 181 gtttcttcct cctggacggg caccggcccc acccccacct gccaccttt gtgggggatc
 241 tcaagtctga acccctgat aggtgtgtgg gtcggagatt gaagaaccct tgaagaggaa
 301 ctgtctcttc ccaaaccctt ccagaactct ctccaaagt agcttcctcc taccctcggc
 361 ctctttgccc a
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 LOCUS BOVPPTA3 334 bp DNA linear MAM 27-APR-1993
 DEFINITION Bovine preprotachykinin B gene, exon 1.
 ACCESSION M14346
 VERSION M14346.1 GI:163582
 KEYWORDS .
 SEGMENT 3 of 9
 SOURCE Bos taurus (cow)
 ORGANISM Bos taurus
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
 Bovidae; Bovinae; Bos.
 REFERENCE 1 (bases 1 to 334)
 AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
 TITLE Structure and gene organization of bovine neuromedin K precursor
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
 MEDLINE [86313713](#)
 PUBMED [3462746](#)
 COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
 FEATURES Location/Qualifiers
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 /organism="Bos taurus"
 /mol_type="genomic DNA"
 /db_xref="taxon:9913"
 intron <1..216
 /note="pre-tach-B intron B"
 prim transcript <17..>334
 /note="preprotachykinin mRNA and introns"
 intron 315..>334
 /note="pre-tach-B intron C"
 BASE COUNT 51 a 125 c 84 g 74 t
 ORIGIN About 5700 bp downstream of exon 1'.
 1 tttgtggtgt gtgtgtgtgt gtgtgtgcgc gtgtgtctga agcctatatc ccccttcacc
 61 ccaccagcc tcccgccccg ccagccaccc tgggattggt gattctcagc cctcccccg

```
121 gctccccag accctcccag agcctttatc agggagctgg gcaggagttc ctgccacatt
181 cccagtgccc tccactccct gtttctctct tcacagcagc agcaccagca gcgttcgtgg
241 ggagcgggca gtgcttcgga ccagctccct gatcctgcta gaccatctgt cccagggtcc
301 aagctgctcc acaggtaggc acaggccaga gaat
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LOCUS BOVPPTA4 179 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine preprotachykinin B gene, exon 2.

ACCESSION M14347

VERSION M14347.1 GI:163583

KEYWORDS .

SEGMENT 4 of 9

SOURCE Bos taurus (cow)

ORGANISM Bos taurus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 179)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.

TITLE Structure and gene organization of bovine neuromedin K precursor

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)

MEDLINE 86313713PUBMED 3462746

COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.

FEATURES Location/Qualifiers

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/organism="Bos taurus"

/mol_type="genomic DNA"

/db_xref="taxon:9913"

prim transcript <1..>179

/note="preprotachykinin mRNA and introns"

intron <1..40

/note="pre-tach-B intron C"

exon <46..159

/note="preprotachykinin B, (1st expressed exon)"

/number=1

intron 160..>179

/note="pre-tach-B intron D"

BASE COUNT 22 a 58 c 54 g 45 t

ORIGIN 557 bp downstream of exon 1.

1 tcctccctgc ctcccctgtc ctgtctctct gtcctcctag gcatcatgag gagcaccctg

61 ctgtttgcag tcaccttgga cctcagctca gtcggaggtt tgggtgcggt ctgtgaggag

121 tcacaggagc aggtggtgcc cgggtgggggt cacagcaagg taaggctccc cctctggtt

//

LOCUS BOVPPTA5 169 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine preprotachykinin B gene, exon 3.

ACCESSION M14348

VERSION M14348.1 GI:163584

KEYWORDS .

SEGMENT 5 of 9

SOURCE Bos taurus (cow)

ORGANISM Bos taurus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 169)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.

TITLE Structure and gene organization of bovine neuromedin K precursor

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)

MEDLINE 86313713PUBMED 3462746

COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.

FEATURES Location/Qualifiers

source 1..169
 /organism="Bos taurus"
 /mol_type="genomic DNA"
 /db_xref="taxon:9913"
prim transcript <1..>169
 /note="preprotachykinin mRNA and introns"
intron <1..40
 /note="pre-tach-B intron D"
exon 41..149
 /number=3
intron 150..>169
 /note="pre-tach-B intron E"

BASE COUNT 33 a 54 c 41 g 41 t

ORIGIN About 2000 bp downstream of exon 2.

1 gtgagccttc cttccggccc tctttgtctc tctcccccag aaggactcaa atctctacca
 61 gctgccccca tcattgctcc ggagactcta tgatagccgc gtggtctccc tggatggatt
 121 gctcaagatg ctgagcaagg ccagcgtagg taggatatac agcctcagg

//

LOCUS BOVPPTA6 90 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine preprotachykinin B gene, exon 4.

ACCESSION M14349

VERSION M14349.1 GI:163585

KEYWORDS .

SEGMENT 6 of 9

SOURCE Bos taurus (cow)

ORGANISM Bos taurus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
 Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 90)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.

TITLE Structure and gene organization of bovine neuromedin K precursor

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)

MEDLINE 86313713

PUBMED 3462746

COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.

FEATURES Location/Qualifiers

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 /mol_type="genomic DNA"
 /db_xref="taxon:9913"
prim transcript <1..>90
 /note="preprotachykinin mRNA and introns"
intron <1..40
 /note="pre-tach-B intron E"
exon 41..70
 /number=4
intron 71..>90
 /note="pre-tach-B intron F"

BASE COUNT 18 a 29 c 16 g 27 t

ORIGIN 195 bp downstream of exon 3.

1 gatcccatc cccagttaca tgcttggtgt tgcttcacag gtcctaagga gtcaccactt
 61 cccagaaac gtgagtagcc tcctttcctt

//

LOCUS BOVPPTA7 114 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine tachykinin B gene, exon 5.

ACCESSION M14350

VERSION M14350.1 GI:163586

KEYWORDS .

SEGMENT 7 of 9

SOURCE Bos taurus (cow)

ORGANISM Bos taurus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 114)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.

TITLE Structure and gene organization of bovine neuromedin K precursor

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)

MEDLINE 86313713

PUBMED 3462746

COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.

FEATURES Location/Qualifiers

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/mol_type="genomic DNA"
/db_xref="taxon:9913" ,

prim transcript <1..>114
/note="preprotachykinin mRNA and introns"

intron <1..40
/note="pre-tach-B intron F"

exon 41..94
/number=5

intron 95..>114
/note="pre-tach-B intron G"

BASE COUNT 22 a 23 c 38 g 31 t

ORIGIN About 480 bp downstream of exon 4.
1 ctcacgtga tgggtgacca tgttgccct ttttatgcag gtgacatgca tgacttcttt
61 gtgggtctca tgggcaagag gaacctccag ccaggtagga gcatggtggg aggg

//

LOCUS BOVPPTA8 135 bp DNA linear MAM 27-APR-1993

DEFINITION Bovine preprotachykinin B gene, exon 6.

ACCESSION M14351

VERSION M14351.1 GI:163587

KEYWORDS .

SEGMENT 8 of 9

SOURCE Bos taurus (cow)

ORGANISM Bos taurus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.

REFERENCE 1 (bases 1 to 135)

AUTHORS Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.

TITLE Structure and gene organization of bovine neuromedin K precursor

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)

MEDLINE 86313713

PUBMED 3462746

COMMENT Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.

FEATURES Location/Qualifiers

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/db_xref="taxon:9913"

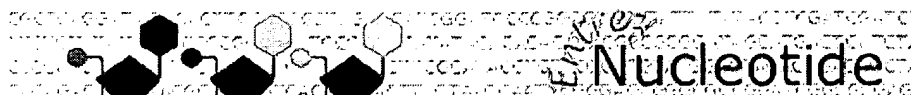
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/protein_id="AAA30723.1"

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DTPVDINQENIPSGTFFKYPPSVE"
prim transcript <1..>135
                /note="preprotachykinin mRNA and introns"
intron          <1..40
                /note="pre-tach-B intron G"
exon            41..>114
                /note="preprotachykinin B"
                /number=6
intron          116..>135
                /note="pre-tach-B intron H"
BASE COUNT      41 a      41 c      22 g      31 t
ORIGIN           385 bp downstream of exon 5.
      1 agaaaaatcc ctcctaactt caccctttac atccctccag acactcctgt tgatataaac
     61 caagaaaaca tccccagctt tggcaccttc aagtaccctc caagtgtgga atgaggtaag
    121 gacttactca gggcg
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LOCUS            BOVPPTA9                      361 bp      DNA      linear      MAM 27-APR-1993
DEFINITION       Bovine preprotachykinin B gene, exon 7.
ACCESSION        M14352
VERSION          M14352.1  GI:163588
KEYWORDS         .
SEGMENT          9 of 9
SOURCE           Bos taurus (cow)
ORGANISM         Bos taurus
                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                  Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                  Bovidae; Bovinae; Bos.
REFERENCE        1 (bases 1 to 361)
AUTHORS          Kotani,H., Hoshimaru,M., Nawa,H. and Nakanishi,S.
TITLE            Structure and gene organization of bovine neuromedin K precursor
JOURNAL          Proc. Natl. Acad. Sci. U.S.A. 83 (18), 7074-7078 (1986)
MEDLINE          86313713
PUBMED          3462746
COMMENT          Original source text: Bovine intestine, cDNA to mRNA, clone pBNK2.
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                                      /mol_type="genomic DNA"
                                      /db_xref="taxon:9913"
                  prim transcript     <1..304
                                      /note="preprotachykinin mRNA and introns"
                  intron              <1..30
                                      /note="pre-tach-B intron H"
BASE COUNT      69 a      103 c      61 g      128 t
ORIGIN           About 2300 bp downstream of exon 6.
      1 tgtagatctg atcttttttt tggctctcag cactccactc ctggactcct gggctacatc
     61 gtgaagacac ccacccttg atgcacatgc ttctatttcc ctctcctcct cctacccttg
    121 taacactctt gtgctttgac cccttcttct ctctgtccca ctggctgcag aaactgcctt
    181 gtgagcatcc ccagtccttg taatcattga ctacagatgg ccctggattt tctgtagcat
    241 cctacaaata taatgtctct ctctattcct caacaataaa ggatttttac atattatgac
    301 ctacaggatg tatttggttg gtggatgggt ttttctcttt cttgactcct ttggctgtat
    361 c
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Oct 2 2003 18:31:01



PubMed Nucleotide Protein Genome Structure PMC Taxonomy OMIM Boo

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Display Show:

☐ 1: NM_009312. Mus musculus tach...[gi:6678208]

Links

LOCUS NM_009312 851 bp mRNA linear ROD 06-OCT-2003

DEFINITION Mus musculus tachykinin 2 (Tac2), mRNA.

ACCESSION NM_009312

VERSION NM_009312.1 GI:6678208

KEYWORDS .

SOURCE Mus musculus (house mouse)

ORGANISM Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

REFERENCE 1 (bases 1 to 851)

AUTHORS Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,
Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D.,
Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,
Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F.,
Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L.,
Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L.,
Scheetz,T.E., Brownstein,M.J., Usdin,T.B., Toshiyuki,S.,
Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J.,
Abramson,R.D., Mullahy,S.J., Bosak,S.A., McEwan,P.J.,
McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S.,
Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Hulyk,S.W.,
Villalón,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A.,
Fahey,J., Helton,E., Kettelman,M., Madan,A., Rodrigues,S.,
Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y.,
Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D.,
Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M.,
Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E.,
Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.

TITLE Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

MEDLINE 22388257

PUBMED 12477932

REFERENCE 2 (bases 1 to 851)

AUTHORS Okazaki,Y., Furuno,M., Kasukawa,T., Adachi,J., Bono,H., Kondo,S.,
Nikaido,I., Osato,N., Saito,R., Suzuki,H., Yamanaka,I.,
Kiyosawa,H., Yagi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,
Schonbach,C., Gojobori,T., Baldarelli,R., Hill,D.P., Bult,C.,
Hume,D.A., Quackenbush,J., Schriml,L.M., Kanapin,A., Matsuda,H.,
Batalov,S., Beisel,K.W., Blake,J.A., Bradt,D., Brusic,V.,
Chothia,C., Corbani,L.E., Cousins,S., Dalla,E., Dragani,T.A.,
Fletcher,C.F., Forrest,A., Frazer,K.S., Gaasterland,T.,
Gariboldi,M., Gissi,C., Godzik,A., Gough,J., Grimmond,S.,
Gustincich,S., Hirokawa,N., Jackson,I.J., Jarvis,E.D., Kanai,A.,
Kawaji,H., Kawasawa,Y., Kedzierski,R.M., King,B.L., Konagaya,A.,
Kurochkin,I.V., Lee,Y., Lenhard,B., Lyons,P.A., Maglott,D.R.,
Maltais,L., Marchionni,L., McKenzie,L., Miki,H., Nagashima,T.,
Numata,K., Okido,T., Pavan,W.J., Pertea,G., Pesole,G.,

*linked Ref
unavailable*

Petrovsky,N., Pillai,R., Pontius,J.U., Qi,D., Ramachandran,S., Ravasi,T., Reed,J.C., Reed,D.J., Reid,J., Ring,B.Z., Ringwald,M., Sandelin,A., Schneider,C., Semple,C.A., Setou,M., Shimada,K., Sultana,R., Takenaka,Y., Taylor,M.S., Teasdale,R.D., Tomita,M., Verardo,R., Wagner,L., Wahlestedt,C., Wang,Y., Watanabe,Y., Wells,C., Wilming,L.G., Wynshaw-Boris,A., Yanagisawa,M., Yang,I., Yang,L., Yuan,Z., Zavolan,M., Zhu,Y., Zimmer,A., Carninci,P., Hayatsu,N., Hirozane-Kishikawa,T., Konno,H., Nakamura,M., Sakazume,N., Sato,K., Shiraki,T., Waki,K., Kawai,J., Aizawa,K., Arakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K., Shinagawa,A., Yasunishi,A., Yoshino,M., Waterston,R., Lander,E.S., Rogers,J., Birney,E. and Hayashizaki,Y.

TITLE Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

JOURNAL Nature 420 (6915), 563-573 (2002)

MEDLINE [22354683](#)

PUBMED [12466851](#)

REFERENCE 3 (bases 1 to 851)

AUTHORS Kako,K., Munekata,E., Hosaka,M., Murakami,K. and Nakayama,K.

TITLE Cloning and sequence analysis of mouse cDNAs encoding preprotachykinin A and B

JOURNAL Biomed. Res. 14, 253-259 (1993)

COMMENT PROVISIONAL [REFSEQ](#): This record has not yet been subject to final NCBI review. The reference sequence was derived from [D14423.1](#).

FEATURES

source	Location/Qualifiers
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	go_function: tachykinin [goid 0008648] [evidence IEA];
	go_function: receptor binding [goid 0005102] [evidence IEA];
	go_process: tachykinin signaling pathway [goid 0007217] [evidence IEA];
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	go_process: synaptic transmission [goid 0007268] [evidence IEA]"
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	/db_xref="GeneID:21334"
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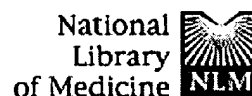
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A cDNA encoding the precursor of the rat neuropeptide, neurokinin B.

Bonner TI, Affolter HU, Young AC, Young WS 3rd.

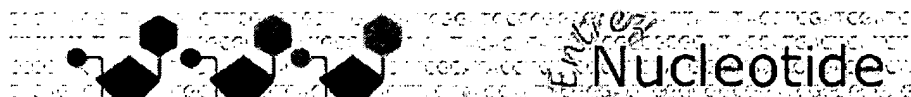
Laboratory of Cell Biology, National Institute of Mental Health, Bethesda, M 20892.

We have isolated a cDNA clone from a rat cerebral cortex library which encodes the 116 amino acid precursor of the neuropeptide, neurokinin B. The precursor has 68% amino acid homology to the bovine precursor and encodes a single peptide of the tachykinin family. Except for possible small variations at both ends of the message, there appears to be only a single species of neurokinin B mRNA in rat cerebral cortex. In situ hybridization histochemistry indicates that the message is widely distributed in the rat brain in a pattern distinct from that of substance P message.

PMID: 3479225 [PubMed - indexed for MEDLINE]

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LOCUS NM_019162 727 bp mRNA linear ROD 06-OCT-2003
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 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
 Rattus.
 REFERENCE 1 (bases 1 to 727)
 AUTHORS Bonner,T.I., Affolter,H.U., Young,A.C. and Young,W.S. III.
 TITLE A cDNA encoding the precursor of the rat neuropeptide neurokinin B
 JOURNAL Brain Res. Mol. Brain Res. 2, 243-249 (1987)
 COMMENT PROVISIONAL REFSEQ: This record has not yet been subject to final
 NCBI review. The reference sequence was derived from [M16410.1](#).
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Entry information

Entry name **TKNK_HUMAN**
 Primary accession number **Q9UHF0**
 Secondary accession numbers None
 Entered in Swiss-Prot in Release 40, October 2001
 Sequence was last modified in Release 40, October 2001
 Annotations were last modified in Release 42, September 2003

Name and origin of the protein

Protein name **Neurokinin B [Precursor]**
 Synonyms **NKB**
Neuromedin K
ZNEUROK1
 Gene name **TAC3**
 From [Homo sapiens \(Human\)](#) [TaxID: [9606](#)]
 Taxonomy [Eukaryota](#); [Metazoa](#); [Chordata](#); [Craniata](#); [Vertebrata](#); [Euteleostomi](#); [Mammalia](#); [Eutheria](#); [Primates](#); [Catarrhini](#); [Hominidae](#); [Homo](#).

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 Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
- [2] SEQUENCE FROM NUCLEIC ACID.
TISSUE=Placenta;
 MEDLINE=20322570; PubMed=10866201; [NCBI, ExPASy, EBI, Israel, Japan]
[Page N.M.](#), [Woods R.J.](#), [Gardiner S.M.](#), [Lomthiasong K.](#), [Gladwell R.T.](#), [Butlin D.J.](#), [Manyonda I.T.](#), [Lowry P.J.](#);
 "Excessive placental neurokinin B secretion during the third trimester causes pre-eclampsia.";
 Nature 405:797-800(2000).
- [3] SEQUENCE FROM NUCLEIC ACID.
TISSUE=Brain;
 MEDLINE=22388257; PubMed=12477932; [NCBI, ExPASy, EBI, Israel, Japan]
[Strausberg R.L.](#), [Feingold E.A.](#), [Grouse L.H.](#), [Derge J.G.](#), [Klausner R.D.](#), [Collins F.S.](#), [Wagner L.](#),

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"Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).

Comments

- **FUNCTION:** Tachykinins are active peptides which excite neurons, evoke behavioral responses, are potent vasodilators and secretagogues, and contract (directly or indirectly) many smooth muscles (*By similarity*).
- **SUBCELLULAR LOCATION:** Secreted.
- **DEVELOPMENTAL STAGE:** In pregnancy, the expression of NKB is confined to the outer syncytiotrophoblast of the placenta, significant concentrations of NKB can be detected in plasma as early as week 9, and plasma concentrations of NKB are grossly elevated in pregnancy-induced hypertension and pre-eclampsia.
- **SIMILARITY:** Belongs to the tachykinin family.

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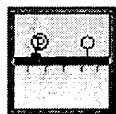
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Genew	HGNC:11521 ; TAC3.
CleanEx	HGNC:11521 ; TAC3.
GeneCards	TAC3 .
GeneLynx	TAC3 ; Homo sapiens.
GenAtlas	TAC3 .
MIM	162330 [NCBI / EBI]. GO:0005615 ; Cellular component: extracellular space (<i>traceable author statement</i>). GO:0005625 ; Cellular component: soluble fraction (<i>traceable author statement</i>). GO:0008648 ; Molecular function: tachykinin (<i>traceable author statement</i>). GO:0007565 ; Biological process: pregnancy (<i>traceable author statement</i>). GO:0007217 ; Biological process: tachykinin signaling pathway (<i>traceable author statement</i>).
SOURCE	TAC3 ; Homo sapiens.
Ensembl	Q9UHF0; Homo sapiens. [Entry / Contig view] IPR003635 ; Neurokinin.

InterPro [IPR002040](#); Tachy_Neurokinin.
[Graphical view of domain structure.](#)
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 ProDom [PD020370](#); Neurokinin; 1.
[\[Domain structure / List of seq. sharing at least 1 domain\]](#)
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 ProtoMap [Q9UHF0](#).
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 ModBase [Q9UHF0](#).
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Keywords

Tachykinin; Neuropeptide; Cleavage on pair of basic residues; Amidation; Signal.

Features

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Key	From	To	Length	Description
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PEPTIDE	81	90	10	NEUROKININ B.
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Sequence information

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 Molecular weight: **13438 Da** [This is the MW of the unprocessed precursor]
 CRC64: **14C9AFE2EE9EDECA** [This is a checksum on the sequence]

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70	80	90	100	110	120
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E

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[Dotlet \(Java\)](#)

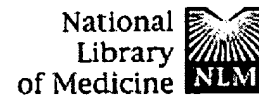


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Effects of human calcitonin gene-related peptide and substance on human intracervical arteries.

Hansen V, Schifter S, Allen J, Maigaard S, Forman A.

Department of Obstetrics and Gynecology, University of Aarhus, Denmark.

The contractile effects of substance P and human calcitonin gene-related peptide (human CGRP) on isolated human intracervical arteries were studied. Human cervical tissue specimens were excised after hysterectomy at various phases of the menstrual cycle (n = 14) and small intracervical arteries were dissected free by microtechnique. Ring preparations of the vessels were prepared and mounted in organ baths, and isometric circular tension was recorded. Neither compound affected resting tension. Both peptides showed potent relaxing effects on vessels precontracted by noradrenaline 10(-5) M. Substance P exhibited the higher potency, while human CGRP showed the higher efficacy. The relaxing effects of the two compounds were unaffected by pretreatment with indomethacin 10(-6) M, propranolol 10(-6) M and atropine 10(-6) M. The results support a role for the two peptides in the regulation of cervical blood flow.

PMID: 2456971 [PubMed - indexed for MEDLINE]

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